



DEPARTMENT OF COMMERCE

International Trade Administration

Application(s) for Duty-Free Entry of Scientific Instruments

Pursuant to Section 6(c) of the Educational, Scientific and Cultural Materials Importation Act of 1966 (Pub. L. 89-651, as amended by Pub. L. 106-36; 80 Stat. 897; 15 CFR part 301), we invite comments on the question of whether instruments of equivalent scientific value, for the purposes for which the instruments shown below are intended to be used, are being manufactured in the United States.

Comments must comply with 15 CFR 301.5(a)(3) and (4) of the regulations and be postmarked on or before (Insert date 20 days after publication in the FEDERAL REGISTER). Address written comments to Statutory Import Programs Staff, Room 3720, U.S. Department of Commerce, Washington, D.C. 20230. Applications may be examined between 8:30 A.M. and 5:00 P.M. at the U.S. Department of Commerce in Room 3720.

Docket Number: 15-029. Applicant: University of California, Irvine, 816 F Engineering Tower, Irvine, CA 92697-2575. Instrument: Electron Microscope. Manufacturer: JEOL Ltd., Japan. Intended Use: The instrument will be used to determine nanoparticle size, crystal structure,

interface and defect structure, surface structure, composition, electronic state, band-gap, cell structure, magnetic domain structure, 3D-structure and phase transformation of various materials such as metals, ceramics, semiconductors, superconductors, polymers and cells.

Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: June 12, 2015.

Docket Number: 15-031. Applicant: University of California, Irvine, 816 F Engineering Tower, Irvine, CA 92697-2575. Instrument: Electron Microscope. Manufacturer: JEOL Ltd., Japan.

Intended Use: The instrument will be used to determine nanoparticle size, crystal structure, interface and defect structure, surface structure, composition, electronic state, band-gap, cell structure, magnetic domain structure, 3D-structure and phase transformation of various materials such as metals, ceramics, semiconductors, superconductors, polymers and cells.

Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: June 12, 2015.

Docket Number: 15-035. Applicant: Drexel University, 3141 Chestnut Street, Philadelphia, PA 19104. Instrument: Electron Microscope. Manufacturer: JEOL Ltd., Japan. Intended Use: The instrument will be used to understand the structure of metal alloys, polymers, ceramics, semiconductors and biological structures and relate this to the material performance by

obtaining structural and morphological information about the materials using electron diffraction, bright field and dark field imaging. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: July 20, 2015.

Docket Number: 15-036. Applicant: The Trustees of Princeton University, 701 Carnegie Center, Princeton, NJ 08540. Instrument: Electron Microscope. Manufacturer: FEI Czech Republic s.r.o., Czech Republic. Intended Use: The instrument will be used for a wide range of applications including microstructural and chemical analysis of the first hydration products of cement, using samples prepared by supercritical drying, to elucidate the process of strength development and identify the effects of additives on the kinetics and microstructure, and the structural analysis of non-conducting nanowires used as gas sensors. Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: July 20, 2015.

Docket Number: 15-037. Applicant: The Trustees of Princeton University, 701 Carnegie Center, Princeton, NJ 08540. Instrument: Electron Microscope. Manufacturer: FEI Electron Optics BV, the Netherlands. Intended Use: The instrument will be used for research such as the interfacial atomic structure of ferromagnetic insulator-topological insulator heterostructures, using FIB prepared thin cross-sections, to elucidate the temperature effect on near-stoichiometric materials which might lead to the development of spintronic devices

based on the large anomalous Hall Effect, and the development and fabrication of uniformly dispersed nanoparticle-doped chalcogenide glass. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: July 30, 2015.

Docket Number: 15-038. Applicant: South Dakota State University, 1400 North Campus Drive, Agricultural and Biosystems Engineering Box 2120, South Dakota State University, Brookings, South Dakota 57007. Instrument: Electron Microscope. Manufacturer: JEOL Ltd., Japan. Intended Use: The instrument will be used to develop techniques for stronger, lighter and cheaper next generation wind turbine blades by characterizing internal and interface structure of nano-fiber enhanced composites, as well as other research. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: August 3, 2015.

Docket Number: 15-039. Applicant: University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd., Dallas, TX 75390. Instrument: Electron Microscope. Manufacturer: FEI Company, the Netherlands. Intended Use: The instrument will be used to learn how imaged proteins and molecules perform their cellular functions, using cryo-transmission electron microscopy. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: August 10, 2015.

Docket Number: 15-040. Applicant: UT Battelle, Oak Ridge National Laboratory, One Bethel Valley Road, P.O. Box 2008, Oak Ridge, TN, 37831-6138. Instrument: Electron Microscope. Manufacturer: FEI Company, Czech Republic. Intended Use: The instrument will be used to study metals and ceramics for nuclear power applications, using transmission electron microscopy to study the evolution of defects in the crystalline structures of the materials before and after irradiation. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: August 14, 2015.

Docket Number: 15-041. Applicant: University of Minnesota, 116 Tate Lab of Physics, Minneapolis, MN 55455-0149. Instrument: IVVI Measuring System with Modules. Manufacturer: Delft University of Technology, the Netherlands. Intended Use: The instrument will be used to uncover novel quantum properties of certain semiconductors or superconductors, such as InAs, GaSb or devices combining these with superconductors such as Al and Nb, using high-sensitivity electronic current and voltage measurements. Unique properties of this instrument include modular integration of pA sensitivity ammeter, required to measure very small electrical currents down to several pA, low-noise transimpedance amplifier, required to transform the electrical currents into voltage signals of a few mV that can be measured with conventional laboratory voltmeters, and low-noise digital-to-analogue converter and signal switchboxes. The entire setup is battery-operated and is programmable

via an optically-decoupled input to minimize electrical noise interference from electrical power lines or other instruments. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: August 18, 2015.

Docket Number: 15-042. Applicant: Purdue University, 610 Purdue Mall, West Lafayette, IN 47907. Instrument: SuperK EXTREME EXR-20 20 MHz with SuperK VARIA High 50dB with Power Lock. Manufacturer: NKT Photonics, Denmark. Intended Use: The instrument will be used to image tissue or tissue like materials with high optical scatter using Optical Diffusion Tomography (ODT), providing useful information for the study of biological and chemical processes. The instrument has a wide turning range, which is important for exciting different fluorophores of interest, providing specificity to chemical processes, a short pulse width which is important for performing time-gated measurements, high laser power which is important for obtaining a high SNR from laser light traveling through centimeters of tissue or related scattering medium, and a 20MHz repetition rate which is important for time-gated measurements given the temporal response time of tissue. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: September 4, 2015.

Docket Number: 15-043. Applicant: New York Structural Biology Center, 89 Convent Ave., New York, NY 10027. Instrument: Electron Microscope. Manufacturer: FEI Co., the

Netherlands. Intended Use: The instrument will be used to determine the three-dimensional structure of biological assemblies to determine the manner in which they function and the mechanisms through which they interact with other cellular components. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: August 27, 2015.

Docket Number: 15-045. Applicant: University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655. Instrument: Vitrobot. Manufacturer: FEI Electron Optics, B.V., the Netherlands. Intended Use: The instrument will be used to understand the three-dimensional structure of purified proteins and complexes at the atomic level, and how this is related to their function, by freezing them, then examining them in the frozen state in an electron microscope. The instrument can precisely control the humidity at any level, and can also control the temperature of the chamber, which is essential to freeze the proteins and complexes under exactly defined conditions, which is a requirement for all of the studies. The specimen remains in the humidity-controlled environment until the instant of freezing, which is essential to prevent any evaporation of water from the specimen before freezing. Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: September 15, 2015.

Docket Number: 15-046. Applicant: National Institute for Occupational Safety & Health, 1095 Willowdale Rd., Room B104, Morgantown, WV 26505. Instrument: Electron Microscope.

Manufacturer: JEOL Ltd., Japan. Intended Use: The instrument will be used to determine the effects of exposing animal lung tissues and cells to particles such as silica and asbestos, nanoparticles such as carbon nanotubes, Titanium Dioxide, graphene and cellulose, in order to make recommendations to industry as to how to protect workers from lung disease.

Justification for Duty-Free Entry: There are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: September 28, 2015.

Dated: October 20, 2015.

Gregory W. Campbell,
Director of Subsidies Enforcement,
Enforcement and Compliance.

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